REMARKS

Claims 1-35 and 37-39 are all the claims pending in the application. By this Amendment,

Applicant editorially amends claim 28 to remedy minor informalities. The amendments to claim

28 were made for reasons of precision of language and consistency, and do not narrow the literal

scope of the claim and thus do not implicate an estoppel in the application of the doctrine of

equivalents. In addition, Applicant amends claims 1, 10, 19, and 29 to further clarify the

invention. Claim 36 is rewritten in its independent form and is now claim 35. Thereby,

Applicant cancels claim 36 and adds claim 39.

Claim Objections

The Examiner objected to claim 28 because of a minor informality. Applicant has

revised the claim, and respectfully submits that the claim as now presented no longer includes

the potential informality mentioned by the Examiner. Applicant therefore respectfully requests

the Examiner to withdraw this objection to claim 28.

Claim Rejections under 35 U.S.C. § 112

The Examiner rejected claims 28-34 under section 112, second paragraph, for improper

antecedent basis in claim 28. Applicant respectfully thanks the Examiner for pointing out, with

particularity, the aspects of the claim thought to be indefinite. Applicant respectfully requests

the Examiner to withdraw this rejection in view of the self-explanatory claim amendment being

made herein.

Claim Rejections under 35 U.S.C. § 103

Claims 1-38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent

No. 6,009,472 to Boudou et al. (hereinafter "Boudou") in view of U.S. Patent No. 6,742,050 to

Beck et al. (hereinafter "Beck"). Applicant respectfully traverses this rejection in view of the

following remarks. Claim 36 is canceled. Thereby, this rejection is rendered moot with respect

to claim 36.

Claims 1-9

With respect to method claims 1-9, only claim 1 is independent. Among a number of

unique features not taught by the prior art reference cited by the Examiner, claim 1 requires:

"under control of a first client application... putting the message into a message queue" and

"retrieving the message from the message queue under a control of a second client application."

The Examiner asserts that claim 1 is directed to a method for communication between an

application on a first computer and an application on a second computer and is obvious in view

of Boudou and Beck.

The Examiner asserts that Boudou teaches a first and a second application which are

equivalent to a communication module of the first and second node (see page 3 of the Office

Action). The Examiner acknowledges that Boudou does not teach or suggest that these modules

are client applications. The Examiner, however, alleges that Beck cures the deficient teachings

of Boudou by teaching client applications (see page 7 of the Office Action). Moreover, the

Examiner alleges that one of ordinary skill in the art would have been motivated to combine the

references in order to provide the capability for managing network resources in a multimodal

information system (see page 7 of the Office Action).

Applicant respectfully disagrees with the Examiner. Applicant has carefully studied

Boudou's discussion of the information system communicating between various nodes using

messages and Beck's discussion of communication between various objects, which are not

similar to under control of a first client application putting the message into a message queue and

retrieving the message from the message queue under a control of a second client application, as

set forth in claim 1. In addition, there is no motivation to combine the references in the manner

suggested by the Examiner.

The initial burden of establishing that a claimed invention is *prima facie* obvious rests on

the USPTO. *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). To make its *prima facie* case

of obviousness, the USPTO must satisfy three requirements:

1) The prior art relied upon, coupled with the knowledge generally available in the art at

the time of the invention, must contain some suggestion or incentive that would have motivated

to artisan to modify a reference or to combine references. *In re Thrif*, 298 F.3d 1357, 1363 (Fed.

Cir. 2002).

2) The proposed modification of the prior art must have had a reasonable expectation of

success, and that determined from the vantage point of the artisan at the time the invention was

made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 (Fed. Cir. 1991).

3) The prior art reference or combination of references must teach or suggest <u>all the</u>

<u>limitations of the claims</u>. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In re Wilson*,

424 F.2d 1382, 1385 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior

art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In*

re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit

from the prior art as a whole, rather than expressly stated. *Id.* Regardless if the USPTO relies on

an express or an implicit showing of motivation, the USPTO is obligated to provide particular

findings related to its conclusion, and those findings must be clear and particular. *Id.* <u>A broad</u>

<u>conclusionary statement, standing alone without support, is not "evidence."</u> *Id.; see also, In re*

Zurko, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

In addition, <u>a rejection cannot be predicated on the mere identification of individual</u>

<u>components of claimed limitations</u>. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Rather,

particular findings must be made as to the reason the skilled artisan, with no knowledge of the

claimed invention, would have selected these components for combination in the manner

claimed. *Id.*

Boudou and Beck, either alone or in combination, fail to teach or suggest a number of

features of independent claim 1. The Examiner acknowledges that Boudou fails to teach or

suggest the client applications as set forth in claim 1. The Examiner, however, asserts that Beck

allegedly provides the necessary disclosure to overcome the acknowledged deficiencies of

Boudou by teaching the communication between objects. Therefore, the Examiner alleges that

the two references teach all the features of independent claim 1.

In general, Boudou relates to a distributed information system where the tasks are

distributed over several nodes. Each node may contain a number of processors, its own

operating system and so on. When the execution of tasks is split up over various nodes it is

important to obtain quick communication between these nodes so as to synchronize nodes,

transfer data and transmit commands between these nodes (col. 1, lines 40 to 54). Therefore,

Boudou attempts to speed up the transfer of messages between the nodes.

Specifically, Boudou's information system SYS represented in FIG. 1 has a number of

processing nodes N (Nx, Ny, etc.), each of which has its own operating system and therefore

functions independently from the others. The nodes N are linked to one another by transmission

links L. Each node has a number of processors P. Each processor P is considered to be

connected to a cache memory CM, which can be integrated into the same integrated circuit as the

processor. Each node also comprises a system bus SB connected to the cache memories CM, to

a memory M, to an input-output subsystem IOS and to a module ISL (Inter System Link), for

communication between nodes.

In Boudou, the module ISLx, like all the other modules in the system, has <u>an internal

interface with the system bus</u> SBx of the node Nx as well as <u>an external interface with the links</u> L

which link the node Nx to the other nodes in the system. Each module ISL is included in the

integrated circuit IC (col. 4, lines 42 to 47). The module ISL has hardware resources which can

be registers or banks of registers which execute functions of a FIFO type (col. 6, lines 34 to 39).

A first node using its ISL sends a message to another node, the message is written in a queue

located at that other node. This other node is the only node that can read a message from the

queue (col. 14, lines 25 to 49). Boudou further teaches that the messages all have the same fixed

size, where a first byte (MTAG) has indicators for the hardware and the remaining fifteen bytes

(SWM) are used by the software to transmit commands or data (col. 14, lines 50 to 63). In

Boudou, the ISL of one node places a message into a queue of another node, and the other node

simply reads the placed message. The ISL module is a computer circuit consisting of an

assembly of electronic components (*e.g.*, registers) as well as certain functions. In other words,

the ISL module is a hardware. The ISL module which has hardware cannot be equated to a

computer application.

Moreover, Boudou does not teach or suggest retrieving the message under the control of

the second application. In Boudou, the processor emits instructions to the module ISL and the

module ISL implements these instructions such as load a message in the queue and sends an

acknowledgement message to the processor, which in response acquires and analyzes the

contents of the message. In other words, it is the processor that controls the retrieval of the

message and not the ISL module. In short, the ISL module cannot be equated with a computer

application because the ISL module has hardware components, and as such clearly cannot be

equated with a computer application. Furthermore, it is the processor that controls the retrieval

of the message and not the ISL module. The processor, just like the ISL module, is a hardware

component that cannot be equated to a computer application. Boudou does not teach or suggest

a computer program or application controlling putting the message into a queue and retrieving of

the message from the queue.

Moreover, when sending instructions to the ISL module, the processor operates in a

kernel mode, a privileged mode. That is, the processor and the ISL module provide low-level

hardware interfaces and have nothing to do with client interfaces and/or client programs. In

short, Boudou does not teach or suggest under control of one client application putting a message

in a queue and retrieving from a queue from another computer application. Finally, Boudou

clearly does not teach or suggest a client application.

Beck, on the other hand, relates to a method of secure communication with an untrusted

JAVA objects. In particular, an applet from a remote source may need to request certain

functions to be performed of a local executable program. The untrusted objects cannot, however,

perform direct calls due to security issues. As a result, in conventional techniques, the untrusted

objects simply cannot communicate with the local objects except for their originating host. In

Beck's system, however, the objects are allowed to indirectly communicate with each other. In

particular, in Beck's system, the sender object requests a channel from an intermediate object

and the intermediate object negotiates with the receiver object to obtain a channel (Fig. 3; col. 4,

line 54 to col. 5, line 51). In Beck, if and once the channel is assigned, the sender object sends

an identification ("Id") of the object and the method (function) it wants the object to perform to

an intermediate object (which has methods corresponding to the methods of the receiver object).

The intermediate object makes a call to the channel object created by the receiver (local) object

and the channel object puts the message from the intermediate object into a message queue of the receiver object (Fig. 4; col. 6, line 18 to col. 7, line 42).

In other words, Beck fails to teach or suggest <u>direct communication</u> where one object creates and places a message into a queue and another object retrieves it. In Beck, one object has to make a call on an intermediate object, which in turn will have to make a call on a channel object and it is only the channel object created by the receiver object that places the message into a queue. In other words, Beck fails to teach or suggest under the control of one client application putting a message into a queue and retrieving the message under the control of a second client application.

In short, neither of the references, either alone or in combination, teach or suggest *under control of a first client application... putting the message into a message queue"* and *"retrieving the message from the message queue under a control of a second client application,"* as recited in claim 1. Thus, Applicant submits that the Examiner cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Moreover, there is no motivation to combine the references in a manner suggested by the Examiner. A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See In re Kotzab*, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (*citing In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). Close adherence to this methodology is especially

important in cases where the very ease with which the invention can be understood may prompt

one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the

invention taught is used against its teacher." *Kotzab,* 55 USPQ2d at 1316 (*quoting W.L. Gore &*

Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements, *In re Kotzab,* 55

USPQ2d at 1316 (*citing In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir.

1998)). Thus, every element of a claimed invention may often be found in the prior art. *Id.*

However, identification in the prior art of each individual part claimed is insufficient to defeat

patentability of the whole claimed invention. *Id.* Rather, to establish obviousness based on a

combination of the elements disclosed in the prior art, there must be some motivation, suggestion

or teaching of the desirability of making the specific combination that was made by the

applicant. *In re Kotzab,* 55 USPQ2d at 1316 (*citing In re Dance,* 160 F.3d 1339, 1343, 48

USPQ2d 1635, 1637 (Fed. Cir. 1998); and *In re Gordon,* 733 F.2d 900, 902, 221 USPQ 1125,

1127 (Fed. Cir. 1984)).

In the present case, Applicant respectfully submits that one of ordinary skill in the art

would not have combined the references in a manner suggested by the Examiner, and that

even if somehow combined they would *result in an unworkable combination*.

To begin, Beck specifically addresses the problem that direct communication between

two objects (where one object is untrusted) is not allowed because it could damage the file

system, network and the like (col. 42 to 50). Boudou, on the other hand, deals with improving

the speed of communication between nodes. The communication between nodes is direct. That

is, in Boudou, one node directly communicates with the other node. If, as alleged by the

Examiner, one would replace the node of Boudou with an object of Beck and allow these objects

to directly communicate with each other, a security breach would results. In other words, the

objects of Beck should never be allowed to communicate like the nodes in Boudou. An artisan

of ordinary skill in the art would not have been motivated, and in fact, would be discouraged

from replacing ISL of Boudou or from modifying ISL of Boudou to include the objects of Beck.

Moreover, the combination suggested by the Examiner results in an unworkable

combination. Boudou's system is a number of nodes performing various functions on various

processors, where the processors could be located at a remote location. To coordinate the

processors at a remote location, some sort of communication is needed. The communication

between processors has nothing to do with client applications. For example, in Boudou, the

modules interface with a bus and a link to another node. Typically, these types of processes

occur transparently to the user, kernel (privileged) mode of communication. In other words,

replacing ISL with a client application would result in an unworkable combination. Moreover,

one of ordinary skill in the art would not have been motivated to modify the system of Boudou to

include a client application along with the ISL module because communication between

processors is a kernel mode of communication, it is meant to be performed without any

interference from the user. In Boudou, the type of communication between the processors is

"read, load, write" instructions. These types of instructions have nothing to do with a client

application. Thus, Applicant respectfully submits that the Examiner cannot fulfill the motivation

prong of a *prima facie* case of obviousness.

Based on at least the foregoing reasons, Applicant respectfully submits that the

combination of Boudou and Beck fails to teach or suggest *"under control of a first client*

application... putting the message into a message queue" and *"retrieving the message from the*

message queue under a control of a second client application." Therefore, the combination of

Boudou and Beck clearly cannot render the present invention obvious as recited in claim 1.

Thus, Applicant submits that claim 1 is allowable and further submits that claims 2-9 are

allowable as well, at least by virtue of their dependency. Applicant respectfully requests the

Examiner to reconsider and to withdraw the § 103(a) rejection of claims 1-9.

Claims 10-18

Next, Applicant respectfully traverses this rejection now with respect to the apparatus

claims 10-18. Of these claims, only claim 10 is independent. Among a number of unique

features not taught by the cited prior art reference, claim 10 contains features that are similar to

the features argued above with respect to claim 1, those arguments are respectfully submitted to

apply with equal force here. For at least substantially the same exemplary reasons, therefore,

Applicant respectfully requests the Examiner to withdraw this rejection of independent claim 10

and its dependent claims 11-18.

In addition, with respect to claim 10, the Examiner alleges that one of ordinary skill in the

art would have been motivated to combine the server "to manage network resources." Applicant

respectfully submits that Boudou already manages the network resources (*e.g.*, each node may

22

have six or more processors) and it is unclear how a server would help manage network

resources. Moreover, it is unclear why one of ordinary skill in the art would have been

motivated to combine a server with the nodes of Boudou. For at least this additional exemplary

reason, Applicant respectfully submits that claim 10 is clearly patentable over the combined

teachings of Boudou and Beck.

Claims 19-27

Applicant respectfully traverses this rejection with respect to claims 19-27. Of these

claims, only claim 19 is independent. Among a number of unique features not taught by the

cited prior art reference, claim 19 contains features that are similar to the features argued above

with respect to claims 1 and 10, those arguments are respectfully submitted to apply with equal

force here. For at least substantially the same exemplary reasons, therefore, Applicant

respectfully requests the Examiner to withdraw this rejection of independent claim 19 and its

dependent claims 20-27.

Claims 28-34

Next, Applicant respectfully traverses this rejection with respect to independent claim 28.

Claim 28 recites features similar to the features argued above with respect to claim 1. Therefore,

those arguments are respectfully submitted to apply with equal force here. For at least

substantially the same exemplary reasons, therefore, Applicant respectfully requests the

Examiner to withdraw this rejection of independent claim 28 and its dependent claims 29-34.

In addition, claim 28 recites "the first application creates a message, and that ... when the

body of the message has content identifier, an object is forwarded to the second application."

The Examiner alleges that Boudou teaches forwarding objects when a message contains content

identifiers (see page 6 of the Office Action). Applicant respectfully disagrees. Boudou teaches

that the processor acquires the message after it is loaded by the ISL provided, however, that the

message is identified (col. 17, lines 49 to 54). In other words, based on the content identifiers, it

is the message that is acquired and not some objects.

Moreover, Boudou clearly fails to teach or suggest that the body of the message

comprises content identifiers. Boudou teaches that the message has one byte of indicators for the

hardware and fifteen bytes intended for the software (Fig. 9; col. 14, lines 50 to 64). Boudou,

however, is silent as to whether these items are in the header or in the body of the message. If

the Examiner alleges that this feature is inherent, Applicant respectfully disagrees.

Under the doctrine of "inherency," if an element is not expressly disclosed in a prior art

reference, the reference will still be deemed to anticipate a subsequent claim if the missing

element "is necessarily present in the thing described in the reference" *Cont'l Can Co. v.*

Monsanto Co., 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). "Inherent

anticipation requires that the missing descriptive material is **'necessarily present,' not merely**

probably or possibly present, in the prior art." (emphasis added) *Trintec Indus., Inc. v. Top-*

U.S.A. Corp., 295 F.3d 1292, 1295, 63 U.S.P.Q.2d 1597, 1599 (Fed. Cir. 2002); see also MPEP

§2112.

In the present case, Boudou teaches that the message is of a fixed size (16 bytes). In

other words, the message is a control message (a command); hence, it is very likely that this

information is in the header of the message. At the very least, there is no teaching in Boudou

that would suggest that these sixteen bytes are necessarily present in the body of the message and

not in the header. For at least this additional reason, Applicant respectfully submits that claim 28

is patentable over the combined teachings of Boudou and Beck.

With respect claim 29, it now recites "said content identifier identifies a search result of a

search performed by said first application." Boudou and Beck have nothing to do with searching

and the first application does not provide search results which are provided to a second

application in a form of a message containing content identifiers. For at least this additional

reason, Applicant respectfully requests the Examiner to withdraw this rejection of claim 29.

Next, claim 30 recites that "the system is a federated content management system." Both

Boudou and Beck fail to teach or suggest the multiple heterogeneous data store system. In

Boudou, only an information system is disclosed but no teachings of the system having a

heterogeneous data store is provided and Beck clearly fails to cure the deficient teachings of

Boudou. Beck only teaches communication between an applet and a local object, it is not related

to an information system or any sort of data store. For at least this additional reason, Applicant

respectfully requests the Examiner to withdraw this rejection of claim 30.

Moreover, claim 33 recites executing "portals for messaging between said first and

second application." Boudou simply teaches transmitting the message to the second node and

placing the message in a queue at the second node and having the message retrieved by the

second node in this queue. Boudou clearly fails to teach or suggest any sort of portal, as alleged

25

by the Examiner, and Beck does not cure the deficient teachings of Boudou. For at least this

additional reason, Applicant respectfully requests the Examiner to withdraw this rejection of

claim 33.

Claims 35, 37, and 38

Next, Applicant respectfully traverses this rejection with respect to independent claim 35.

Claim 35 recites features similar to the features argued above with respect to claim 1. Therefore,

those arguments are respectfully submitted to apply with equal force here. For at least

substantially the same exemplary reasons, therefore, Applicant respectfully requests the

Examiner to withdraw this rejection of independent claim 35 and its dependent claims 37 and 38.

In addition, claim 35 recites "creating a message, wherein the message comprises a text

length value and a content identifier count value." In Boudou, the message has a predetermined

size; as such there is no need for the message to include its size. Boudou only teaches having

three indicators that indicate "last message in the queue, undefined message, normal message but

the queue is overflowing, and normal message" (col. 17, lines 36 to 48). These identifiers,

however, identify the position of the message within the queue (last message, in overflow) etc.

These content identifiers do not identify the content of the message. Boudou only has an

identifier to identify if a message cannot be read (undefined) but not identify the amount of text

or number of content identifiers in the text. In Boudou, the messages appear to be commands

with no text. Clearly Boudou does not teach or suggest these messages include a text length

value. Moreover, Boudou fails to teach or suggest text identifiers even for the data messages.

Similarly, *assuming arguendo*, that the content identifiers can somehow be compared to

indicators for hardware (MTAGs), there is no need to include content identifier count value since

the number of hardware indicators in Boudou is preset. There is no need to have a count value

identifying the number of hardware indicators.

Beck does not cure the deficient teachings of Boudou. *Assuming arguendo* the object

identifier in Beck can somehow be compared to a content identifier, Beck fails to teach or

suggest having a count value identifying a number of objects included. In short, Beck, each

request is directed to only one object. That is, in Beck, there is no count number identifying the

number of objects included in the request. Beck clearly fails to cure the deficient teaching of

Boudou. For at least this additional reason, Applicant respectfully submits that claim 35 is

clearly patentable over the combined teachings of Boudou and Beck.

With respect to the dependent claim 37, the Examiner alleges that "event notification," as

set forth in this dependent claim is equivalent to a command message of Boudou (see page 8 of

the Office Action). Applicant respectfully disagrees. A command message requests the receiver

to perform a certain task, whereas an event notification notifies the receiver of a certain event

that occurred in the sender. In other words, the two types of messages cannot be equated. Beck

fails to cure the deficient teachings of Boudou, as it too, only teaches sending command

messages to the local objects. In short, for at least this additional reason, Applicant respectfully

submits that claim 37 is clearly patentable over the combined teachings of Boudou and Beck.

Finally, with respect to claim 38, it recites: "when the content identifier count value is

greater than zero, the message further comprises at least one content identifier identifying an

object from a heterogeneous storage." The Examiner alleges that this is equivalent to Boudou's

teaching of the hardware indicators (MTAGs) that indicate whether the message is the last one,

in overflow, normal or undefined (see page 8 of the Office Action). Applicant respectfully

submits that these indicators clearly fail to teach or suggest at least one content identifier

identifying an object from a heterogeneous storage. In Boudou, there is no teaching of a

heterogeneous storage. In fact, Boudou does not mention or suggest even a conventional

database. It is simply not the focus of Boudou's teaching. Furthermore, in Boudou, there is

clearly no teaching of a content identifier identifying an object from the heterogeneous storage.

Beck clearly fails to cure the deficient teachings of Boudou. It too, has nothing to do with

datastores or database. Moreover, Beck fails to mention or suggest a heterogeneous storage. For

at least this addition reason, Applicant respectfully submits that claim 38 is clearly patentable

over the combined teachings of Boudou and Beck.

New Claim

In order to provide more varied protection, Applicant adds claim 39. Claim 39 is

patentable at least by virtue of its dependency on claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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23373
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Date: October 27, 2004